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December 17, 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

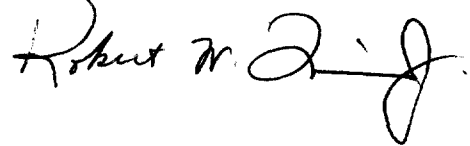
RE: Ex Parte
CC Dkt. No. 97-231 Applications by BellSouth Telecommunications, Inc.
and BellSouth Long Distance, Inc. for Provisioning of In-Region,
interLATA Service in Louisiana.

On Tuesday December 16, 1997, Greg Follensbee, Wayne Ellison, Stephen C. Garavito, Ken McNeely, Steve Levinson and I of AT&T and Dr. Janusz Ordovery of Consultants in Industry Economics, L.L.C met with Mike Riordan, Brad Wimmer, Anu Seam, Katherine Schroder, Michael Kende, Rich Lerner, Douglas Galbi, Raj Kannan, Daniel Shiman, and Don Stockdale of the Commission Staff. The purpose of this meeting was to discuss the pricing issues raised in AT&T's Comments in the aforementioned proceedings. Attached is the summary which AT&T used during its this presentation. Also attached are two documents handed out during the presentation which are already a part of the record in this proceeding: the testimony of Catherine E. Petzinger on behalf of AT&T before the Louisiana Public Utilities Commission in Docket Nos. 22022 & 22093 (the "Louisiana TELRIC proceeding"); and Exhibits 1 and 3 from the direct testimony of Ernest Carter on behalf of AT&T in the Louisiana TELRIC proceeding (all three documents are included as part of Appendix C3, Volume 32, Tab 271 of BellSouth's Application).

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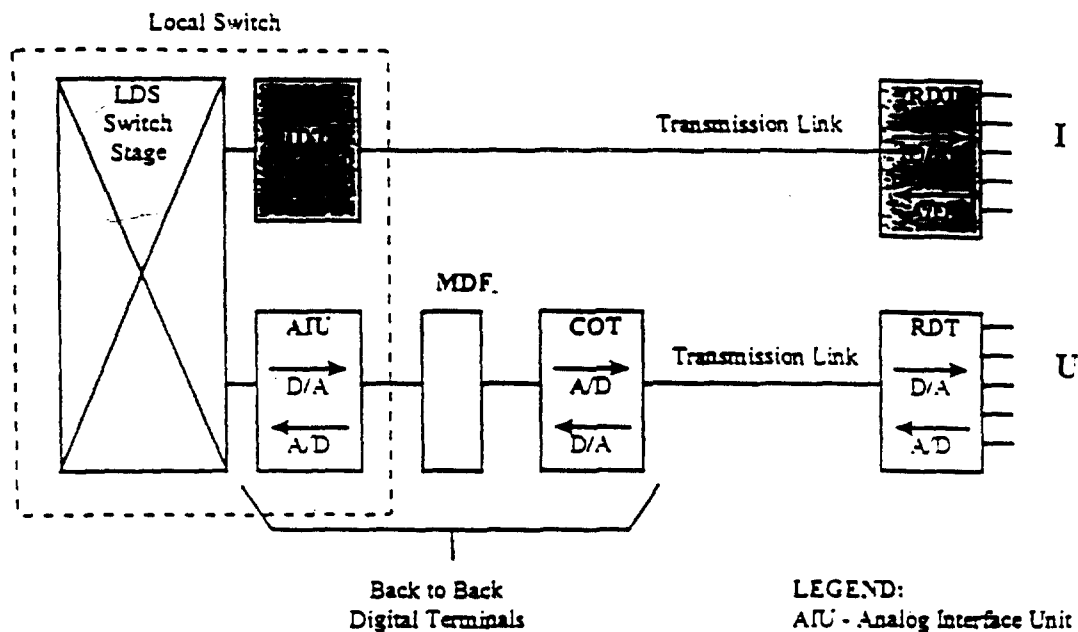
Two copies of this Notice are being submitted on the following business day to the secretary of the FCC in accordance with Section 1.1206(a)(1) of the Commission's rules.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Ziegler". The signature is fluid and cursive, with a large initial "R" and a long, sweeping horizontal line at the end.

Attachments

cc: M. Riordan
L. Kinney
B. Wimmer
A. Seam
K. Schroder
M. Kende
R. Lerner
D. Galbi
R. Kannan
D. Shiman
D. Stockdale



LEGEND:
 AIU - Analog Interface Unit
 D/A - Digital to Analog Conv
 A/D - Analog to Digital Conv
 IDT - Integrated Digital Term
 RDT - Remote Digital Termi
 MDF - Main Distributing Fra
 ← - Indicates direction of

EXHIBIT 1: IDLC vs. UDLC

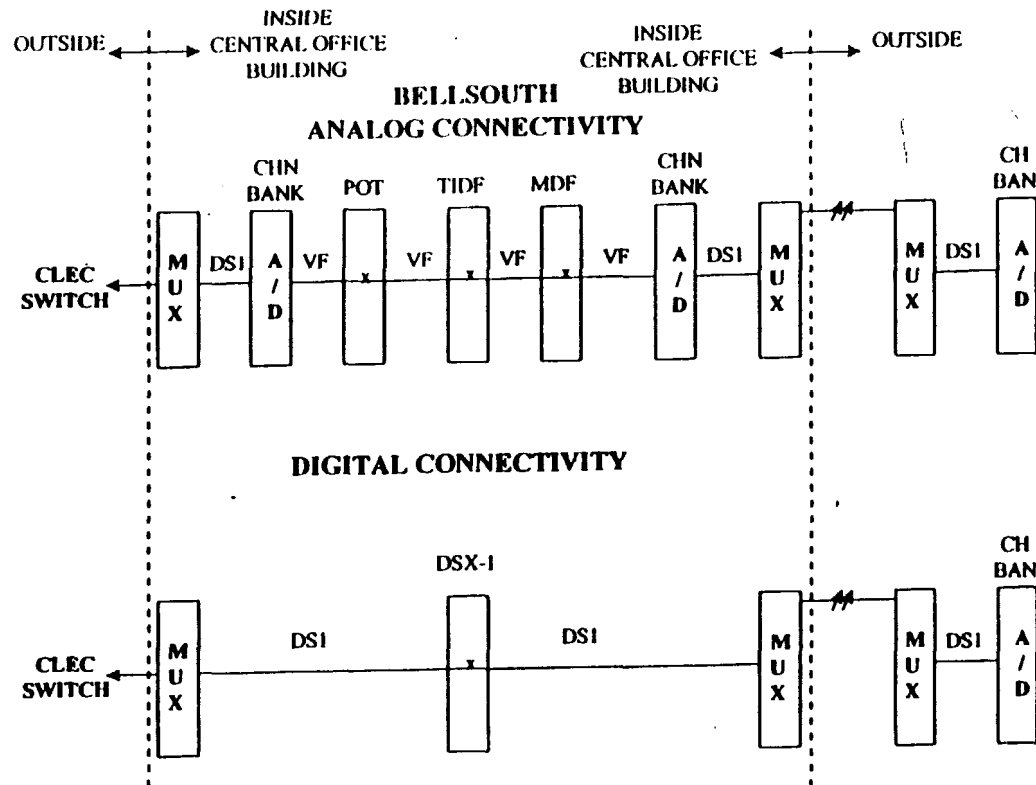


EXHIBIT 3: Comparison Analog vs Digital Connectivity

BellSouth's Section 271 Application for Louisiana

Application by BellSouth Telecommunications, Inc., and BellSouth Long
Distance, Inc. for Authority to Provision In-Region, InterLATA
Services in Louisiana, CC Docket No. 97-231

BellSouth Costing Methodology Does Not Reflect Forward-Looking, Least Cost, Most Efficient Technology

- Unbundled Loops
 - Methodology requires extensive “judgment” inputs
 - Methodology cannot produce deaveraged costs
 - Excludes From Calculation Most Shorter Business Loops (ESSX, PBX), Increasing All Loop Costs
 - Assumes Existing Cable Size and Structure With Actual Fill Factors
 - 5% Adjustment Is Not Forward Looking, Most Efficient.

BellSouth Costing Methodology Does Not Reflect Forward-Looking, Least Cost, Most Efficient Technology

Unbundled Loops Continued

- Brings All Loops Down to 2 Wire, Copper Pair
 - Assumes Collocation to Combine Loop and Switching Elements
 - Assumes Manual Intervention, Increasing Non-Recurring Costs
 - Includes Both Costs of Digital Technology (IDLC) As Well As Conversion Back to Analog

BellSouth Costing Methodology Does Not Reflect Forward-Looking, Least Cost, Most Efficient Technology

- Unbundled Local Switching
 - Switching Costs Based On Incorrect Discount, Not Actual Vendor Discounts
 - Vertical Feature Costs Based On Assumption That Switch Is CCS Limited, Rather Than Line Limited Resulting In \$10.48 Rate for Port with Features (BellSouth proposed Rate Was \$11.97)
 - SCIS, Created In 1970s, Does Not Reflect Today's Switch Structure
 - Price Proposed By BellSouth Does Not Include All Switch Features (24 Features Out of 1000)
 - Brings All Digital Ports Down to Analog
 - Assumes Collocation to Combine Elements
 - Assumes Manual Intervention Increasing Non-Recurring Costs
 - Adds additional switch investment to convert digital ports to analog
-

BellSouth Costing Methodology Does Not Reflect Forward-Looking, Least Cost, Most Efficient Technology

- Collocation
 - Actual Costs to Convert Existing Central Offices
 - Unspecified Cost for “Space Preparation”
- Non-Recurring Costs
 - Assumes All Manual Processes, Some Dating to 1989
 - Assumes 20% fall-out of electronic orders, requiring manual intervention
 - Assumes Collocation to Combine Network Elements
 - Manual Processes to Bring Loops and Ports from Digital to Analog
 - \$143.11 to Manually Coordinate Provision of Loop and Port Combination When CLEC Wants (Potentially Plus \$15.86 For Disconnect)
 - \$117.52 to Manually Coordinate a Rolled Loop When a CLEC Wants (Potentially Plus \$11.48 For Disconnect)
 - OSS Cost of \$9.16 for each Electronic Order

BEFORE THE LOUISIANA PUBLIC UTILITIES COMMISSION

**TESTIMONY OF
CATHERINE E. PETZINGER**

RECEIVED

AUG 26 1997

**LOUISIANA PUBLIC SERVICE COMMISSION
ALTERNATE HEARINGS DIVISION**

ON BEHALF OF

**AT&T COMMUNICATIONS
OF THE SOUTH CENTRAL STATES, INC.**

DOCKET NOS. 22022/22093

AUGUST 25, 1997

NON PROPRIETARY VERSION



1 1.0 INTRODUCTION

2 Q. PLEASE STATE YOUR NAME, PRESENT POSITION AND BUSINESS
3 ADDRESS.

4 A. My name is Catherine E. Petzinger. I am a District Manager with AT&T Corp. in
5 Regulatory and Legislative Affairs, 295 North Maple Avenue, Basking Ridge, New
6 Jersey.

7 Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE AND EDUCATIONAL
8 BACKGROUND.

9 A. I have an MBA from Rutgers University, New Jersey, and have thirteen years of
10 experience in the telecommunication industry building, and subsequently leading, a
11 group that developed switching cost models, including the Switching Costs
12 Information System ("SCIS"). My experience includes extensive consultation on the
13 use of cost models in various cost studies in the United States and abroad.

14 At Bellcore for 13 years, I was one of three individuals who designed the SCIS/TN¹
15 program and implemented new incremental costing methodology into the program. I
16 also was the lead subject matter expert on feature costing in general as well as a
17 subject matter expert on 1ESS, 1A ESS and 5ESS switches. When I was promoted to
18 lead the SCIS group of approximately 20 people, I had responsibility for the technical
19 development, production, documentation, customer care and cost study consultation
20 for all the switch technologies that SCIS includes (approximately ten, including the

1 SCIS/TN is the feature costing model in the SCIS family of models.

1 switches used internationally). I also had responsibility for marketing the Bellcore
2 cost models in Europe and Asia/Pacific.

3 Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGARD TO LEC COST
4 MODELS IN GENERAL AND THE SWITCHING COST INFORMATION
5 SYSTEM (SCIS) IN PARTICULAR?

6 A. Yes, I have presented expert testimony before the Public Utilities Commission of
7 California on behalf of AT&T Communications of California, Inc. (R.93-04-003)
8 concerning Pacific Bell's switching investment study on March 17, 1997; before the
9 Public Utility Commission of Texas on behalf of AT&T Communications of the
10 Southwest, Inc. (Docket No. 16226) concerning Southwestern Bell's Texas switching
11 investment study on April 21, 1997; before the Public Service Commission of Nevada
12 on behalf of AT&T Communications of Nevada, Inc. (Docket No. 96-9035)
13 concerning Nevada Bell's and Sprint/Central Telephone's switching studies on June
14 6, 1997; and before the Public Utilities Commission of the State of Hawaii on behalf
15 of AT&T Communications of Hawaii, Inc. (Docket No. 7702) concerning switch
16 prices used as inputs to the Hatfield model.

17 2.0 PURPOSE AND SUMMARY OF TESTIMONY.

18 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

1 A. The purpose of my testimony is to report my findings regarding BellSouth's
2 switching investment studies² and recommend new switching investments that serve
3 as the foundation for many of the unbundled local switching prices sponsored by Mr.
4 Ellison.

5 Q. PLEASE SUMMARIZE THE MAIN POINTS OF YOUR TESTIMONY

6 A. Unbundled local switching elements consist of "Port," such as 2-wire port, 4-wire
7 DS1 port, etc., and "Minute of Use" components.

8 Determining the investment of these unbundled elements should be relatively
9 straight-forward, and may be done as follows:

- 10 • Identify the total long-run incremental investment in a switch;
- 11 • Determine what portion is non-traffic sensitive and recover these investments
12 through the Port Element component; and
- 13 • Determine what portion is traffic sensitive and recover these investments through
14 the Minute of Use component.

15 Instead of a simple, direct approach to costing switching *elements*, BellSouth has used
16 a complex, *service-specific* costing methodology that is applicable only for retail
17 business pricing. These overly complicated switching cost studies are flawed in the
18 following major respects:

2 There is a technical distinction between "cost" and "investment." In my testimony, investment refers solely to the capital expenditure for the switch. To determine cost, additional capital expenditures for land, building, power, and local telephone company installation are added to the investment. This total is annualized via cost factors into a capital-related cash flow requirement

- 1 1. BellSouth began its entire switching cost process with incorrect switching prices.
- 2 BellSouth utilized an incorrect discount to customize the SCIS/MO³ switching vendor
- 3 list prices to reflect "actual prices" paid by BellSouth. This incorrect discount causes
- 4 the investments, and ultimately the rates, of all of BellSouth's switching elements to
- 5 be significantly overstated. In addition to comparing BellSouth/vendor contracts to
- 6 the switch prices used by BellSouth in this study, I will present publicly available
- 7 information regarding switching prices paid by Southwestern Bell, Pacific Bell, and
- 8 U.S. West that provide comparative price points which demonstrate that BellSouth's
- 9 SCIS switch price estimates are substantially inflated.
- 10 2. BellSouth has not included integrated digital loop carrier (IDLC) in any of the port
- 11 investments. The port investments should reflect a melding of both analog and
- 12 forward-looking GR303-compliant IDLC investments. BellSouth's use of only
- 13 analog line investments overstates the actual investments for line ports.
- 14 3. BellSouth inappropriately allocated the non-traffic sensitive first cost of switching, or
- 15 "Getting Started Investment," to the traffic sensitive Minute of Use component.
- 16 Including non-traffic sensitive investments in the traffic sensitive Minute of Use
- 17 component violates the principle of cost-based rates.
- 18 4. BellSouth's complex bottom-up methodology is not validated by re-assembling the
- 19 detailed switching sub-elements to determine whether the calculated individual
- 20 investments add up to the total switching investment. Unless this critical analysis is

and then expenses are added to determine "cost." I will use the term "price" to refer to the price paid by telephone companies to switch vendors.

³ As explained more fully below, the SCIS/MO program calculates the investment for various

1 performed, the sum of the parts may be larger than the original investment; thus, the
2 accuracy of BellSouth's methodology cannot be evaluated nor accepted.

3 In addition to the critical items listed above, BellSouth has made errors in inputs and
4 assumptions and excluded almost one million subscriber lines from the cost study.

5 **3.0 BELLSOUTH'S SWITCHING COST STUDY OVERVIEW**

6 **Q. WHAT ARE THE SCIS MODELS?**

7 A. The SCIS programs were originally developed by Bellcore to identify the investments
8 associated with features and services provided from central office switching
9 machines. The SCIS/MO program determines the investments for various functions
10 that a switch performs.

11 SCIS/MO calculates two levels of investments: (1) Unit Investments that identify the
12 investment of various switching functions, such as the investment per processor
13 millisecond; and (2) Total Investments that identify the total investment in the switch,
14 broken down by the same switching function categories as in the Unit Investment
15 report. The unit and total investments for non-ISDN basic end office investment
16 categories are illustrated in Table 1 on the next page.

functions performed by a switch.

1

Table 1

Unit Investment	Total Investment

2
3*Notes to Table 1:*

1 Q. HOW DID BELLSOUTH USE THE SCIS MODELS?

2 A. BellSouth used the SCIS/MO program from Bellcore to calculate investments in both
3 end office and tandem switching. However, there are many more SCIS/MO *outputs*,
4 as shown above, than switching *elements*. Thus, BellSouth developed other models
5 and spreadsheets to aggregate and allocate the above investments into the basic
6 switching rate elements proposed by BellSouth:

- 7 • Line Ports
- 8 • Trunk Ports
- 9 • End Office Switching Minute of Use
- 10 • Trunk Port Minute of Use
- 11 • Tandem Switching Minute of Use
- 12 • Tandem Port Minute of Use.

13 The SCIS/TN model utilizes the Unit Investment results from the SCIS/MO program
14 to develop the cost of services. BellSouth apparently did not actually use the SCIS/TN
15 program, but copied SCIS/TN algorithms and program data inputs into multiple
16 SCIS/TN-like spreadsheets to calculate investments for some of the port elements.
17 Thus, any reported integrity between SCIS/MO and SCIS/TN cannot be assured in the
18 BellSouth study.

19 BellSouth used the SCIS/MO outputs in their Central Office Calculator and Switched
20 Network Calculator to determine the investments for the Minute of Use component
21 for local and tandem switching and the trunk port Minute of Use component for local

1 and tandem trunks. The SCIS/MO minimum line termination results were used
2 directly to determine the investment for the line ports.⁴
3 Switching investments were then processed in BellSouth's TELRIC models to
4 include additional loadings, such as land and building, convert the investment to an
5 annual cash flow, and add expenses to generate the costs of switching unbundled
6 elements.

7 **4.0 BELLSOUTH'S SWITCH PRICES ARE LOWER THAN THE PRICES**
8 **BELLSOUTH USED IN THE COST STUDY**

9 **Q. DOES THE SCIS/MO CALCULATE THE ACTUAL PRICES PAID BY**
10 **BELLSOUTH FOR SWITCHES?**

11 **A. No. The SCIS/MO and BellSouth's SCIS/TN-like spreadsheet models contain vendor**
12 **list prices that require the user to enter a discount to customize the switching**
13 **investments to reflect the "actual prices" paid by the local telephone company,**
14 **according to locally negotiated contracts and/or agreements.**
15 **The discount factors utilized for each switch type are of critical importance in the**
16 **evaluation of any SCIS study since these discounts affect every SCIS output (i.e., a**
17 **discount factor of 50% generates SCIS outputs that are half the values produced using**
18 **the list price). Therefore, if the discount factors do not reflect the actual price in**
19 **BellSouth's negotiated agreements with switching vendors, the results produced by**
20 **SCIS will misstate BellSouth's switching investments.**

4 Except the Coin port, which used equations and prices for equipment from SCIS/TN.

1

2 Q. WHAT ARE THE SWITCH PRICES PER LINE IN BELL SOUTH'S VENDOR
3 SWITCHING CONTRACTS?

4 A. BellSouth recently made its switch vendor contracts available to AT&T through a
5 data request. The accessibility was limited because BellSouth would not allow copies
6 to be made and AT&T had to review these voluminous contracts at BellSouth's
7 premises. Nonetheless, BellSouth's Nortel contract indicates that BellSouth receives
8 a ***** discount, and can receive up to a ***** discount⁵. The contract
9 also references the existence of additional discounts, but these were not specified.
10 The Nortel switches terminate 35% of BellSouth's subscriber lines in Louisiana.⁶

11 The dominant Lucent 5E switches are covered via two contracts - one general contract
12 executed in 1992⁷ and an additional agreement that is more current.⁸ The agreement
13 provides prices for specific switch replacements throughout the BellSouth States,
14 including 50 switches in Louisiana. These recent contracts indicate that BellSouth
15 pays *** per line⁹ for 5E switches. It is important to note that these prices per line
16

⁵ Nortel Contract PR-6900-A.

⁶ Based on the lines included in the BellSouth study.

⁷ Lucent Agreement PR-6700-B.

⁸ 12/93-12/99 and 1/95-12/06.

⁹ Id; the Price drops from ***** when ***** lines are purchased. Note that the term "price per line" is equivalent to total switching price divided by total number of lines. The price per line is *not* the same as the port investment.

1 , which is also added
2 separately by BellSouth by applying a ***** factor to the switch investments.¹⁰

3 It is also interesting to note that BellSouth has an existing contract (1992-1999) and a
4 subsequent Letter of Authorization¹¹ with Siemens Stromberg-Carlson for switches
5 with prices even lower than the Lucent switches.¹² BellSouth has excluded all
6 Siemens and Nortel DMS-10 switches from its studies because BellSouth considers
7 only the Lucent 5E2000 and the Nortel DMS-100 Family of switches to be forward-
8 looking for BellSouth's network.

9 **Q. HOW DOES THIS COMPARE TO HATFIELD SWITCH PRICES?**

10 **A.**The point on the Hatfield switch curve that corresponds to the average BellSouth
11 Louisiana switch line size is approximately \$110.00; therefore, Hatfield is extremely
12 conservative compared to one of BellSouth's contracts.

13

14 **Q. WHAT IS THE DIFFERENCE ON A PER LINE BASIS BETWEEN THE**
15 **NORTEL AND LUCENT CONTRACTS?**

¹⁰ The ***** components are supposed to be assigned to the power account that BellSouth charges for ***** by calculating a loading factor that is subsequently applied to the switching investments. There is a strong probability, however, that double counting has occurred for the ***** investments.

¹¹ The Letter of Authorization was crafted to apply only to Tennessee switch purchases, but it is safe to assume that BellSouth could negotiate a similar agreement for Louisiana.

¹² Letter of Authorization 5/31/95: "Siemens offers *** (EF&I) per equipped line . . ."

1 A. The Nortel contract discounts were used by BellSouth as direct inputs to SCIS/MO,
2 which generates a DMS price per line of \$226.40.¹³ BellSouth's Lucent contract
3 explicitly states the price per line is *** (including significant amounts of additional
4 equipment described above that is not included in the \$226.40 price).

5 Q. **WHAT EXPLANATIONS COULD THERE BE FOR THIS DISPARITY**
6 **BETWEEN BELL SOUTH'S VENDORS?**

7 A. Lucent and Nortel are aggressively competing in all areas of the switching market, as
8 evidenced by the Nortel/US WEST switch price per line of a maximum of \$68 per
9 line described below. It would likewise be anticipated that in any head to head
10 competition for BellSouth's business, bids among the various switch providers would
11 be similarly competitive. The fact that BellSouth has included Nortel prices that are
12 three and a half times higher than Lucent prices may indicate that:

- 13 • The Nortel contract could be a "baseline" contract, equivalent to the older
14 Lucent contract which is also still in effect, that specifies much ***** prices.
- 15 • There may be additional Nortel agreements, as we have seen with Lucent, that
16 BellSouth did not provide, that could specify prices competitive with Lucent's
17 prices.
- 18 • BellSouth simply may not have plans to place Nortel switches in the near
19 future and has not initiated aggressive negotiations for ***** switching prices
20 as it has done with Lucent.

¹³ Calculated from total DMS switching investment divided by total DMS lines.

1 Q. HOW SHOULD THIS DISPARITY BE TREATED IN THE COST STUDIES?

2 A. The cost studies should use switch prices per line for both technologies that are
3 comparable and reflect forward-looking, least-cost technology. If BellSouth is going
4 to place Nortel switches, then it should be expected that BellSouth would negotiate
5 prices with Nortel which would be competitive with those BellSouth has negotiated
6 with Lucent.

7 Q. WHAT ARE THE AVERAGE SWITCH PRICES PER LINE IN THE
8 INDUSTRY?

9 A. The Northern Business Information (NBI) study, "U. S. Central Office Equipment
10 Market", states that the average price for RBOC digital switches per line shipped in
11 1995 was \$102, and \$99 in 1996. The study also indicates that per line prices are
12 expected to continue to decline slightly through the remainder of the decade. NBI
13 data is used as the foundation for Hatfield.¹⁴

14 Both Lucent and Nortel have referenced this document's marketing data estimates,
15 which lends credibility to NBI's expertise in the central office equipment market.¹⁵
16

17 Q. DO THE SWITCH PRICES REPORTED FOR PACIFIC BELL SUPPORT
18 BELL SOUTH'S PRICING?

¹⁴ The Hatfield switching curve also uses an additional industry price point of \$75.00 per line for large switches that will be corroborated in subsequent paragraphs.

¹⁵ Lucent and Nortel October 15, 1996, Filings in response to FCC Supplemental Request for Information from Lucent and Nortel, respectively. Cited in FCC document 97-125, page 24.

1 A. No. Four years ago, Pacific negotiated a major contract for approximately \$110 per
2 line.¹⁶ Moreover, according to the NBI study, the price per line for switching has
3 been declining and is expected to continue to decline. The four-year old data for
4 Pacific, when brought down to current switch prices with a .97 factor per year¹⁷ would
5 result in \$97 per line.¹⁸ There were no separate prices quoted for different size
6 switches, so the deflated \$97 per line either applies to all line size switches or is an
7 average, and the \$97 per line provides a comparative price point to evaluate the
8 BellSouth switching prices.

9 Q. DO THE SWITCH PRICES REPORTED BY SPRINT SUPPORT
10 BELL SOUTH'S PRICING?

11 A. No. The January, 1997, BCPM¹⁹ proxy model contained switching prices using a
12 fixed investment of \$261,871 and variable per line amount of \$225²⁰ that were the
13 results of a survey, based on telephone company inputs to SCIS. Sprint later retracted
14 these switching prices, stating that "there exists a fundamental disagreement

¹⁶ Included in GTE's Responses to proxy cost model questions in CC Docket 96-45, Federal-State Joint Board on Universal Service Proxy Cost Models, January 7, 1997.

¹⁷ Extrapolated from the NBI yearly prices.

¹⁸ This data substantiates the prices used in Hatfield. The average switch size for Pacific Bell is 27,200 lines. The average switching cost on the Hatfield cost curve for a 27,200 line switch is \$90.

¹⁹ The Benchmark Cost Proxy Model ("BCPM") was, until recently, jointly sponsored as a proxy model by Sprint, US WEST and Pacific Bell. Pacific Bell has withdrawn and has been replaced by BellSouth as a sponsor.

²⁰ BCPM Methodology (no date), Page 20.

1 concerning the prices of switching."²¹ Sprint submitted new BCPM inputs for
2 switching prices of \$150,000 fixed/startup and \$110 per line.²² Sprint said that
3 "[a]lthough the current BCPM values [the new lower values] more closely
4 approximate Sprint's prices of switching . . ."²³ For a 15,000 line switch, allocating
5 the \$150,000 fixed investment to the lines would result in an overall average price of
6 switching of \$120 per line. While AT&T does not propose that this is the correct
7 price, it provides a comparative price point to evaluate the BellSouth switching
8 prices.

9 **Q. DOES SOUTHWESTERN BELL'S SWITCH PRICE PER LINE IN 1996**
10 **SUPPORT BELL SOUTH'S PROPOSED PRICES THAT IT HAS INCLUDED**
11 **IN ITS COST STUDIES?**

12 **A.** No. Mr. Hugh Raley stated in 1996 testimony on behalf of Southwestern Bell
13 Telephone, "the Engineered, Furnished and Installed"(EF&I) price was \$85/line"²⁴ for
14 switching. Mr. Raley stated that the \$85 includes "everything that is required to make
15 the switch work," . . . "the trunks, the fabric, the processors - the total price from a
16 vendor standpoint divided by the number of lines on the switch." He also indicated

21 Ex Parte Letter, 3/24/97, from Mr. Warren D. Hannah, Sprint to Mr. William F. Caton, FCC, Attachment A, page 5. Mr. Glenn Brown, US WEST, also indicated at a meeting with the FCC on 7/29/97 that BCPM will be revising its switching prices.

22 Id., Attachment BCPM National Results Using Sprint Input Values, Page 3.

23 Id., Attachment A, Page 3. The remainder of the quote dealt with a recommendation to use the higher rates for USF purposes.

24 Direct Testimony of Hugh W. Raley, 9/6/96, Docket Nos. 16189, 16196, 16226, 16285, 16290; p. 7, lines 9-10 and Deposition of Hugh Raley, 9/13/96. See Attachment 2 to Mr. Raley's testimony.

1 that this figure represents recent bids both from Lucent and Nortel and that this price
2 was the average *and not the lowest bid price*. Mr. Raley included in his testimony an
3 Attachment²⁵ which revealed the following:

	1-15,000 lines	15-40,000 lines	40-80,000 lines
EF&I Inv. Per Line	\$140	\$115	\$85

4

5 **Q. DOES BELLSOUTH'S MODEL TAKE INTO ACCOUNT THE MOST**
6 **CURRENT INFORMATION REGARDING THE PRICE OF SWITCHES?**

7 **A.** No. The most current information comes from Nortel's Internet web page²⁶
8 announcing that a contract has been signed with US WEST "in excess of \$US 100
9 million" for 2.2 million DMS-100 lines. This implies switch prices as low as *\$45 per*
10 *line*. Even allowing for the *in excess* to be an incredible additional 50% of the
11 contract, for a total of \$150 million, \$150 million divided by 2.2 million lines would
12 yield a price per line of only \$68. Nortel also indicated that this upgrade of US

Included here at Exhibit I.

25 Note, however, that in the Attachment there are other equipment costs added to Mr. Raley's \$85/line such as taxes. AT&T agrees that these need to be added, but the relevant cost in this analysis is the actual price paid to the vendor which Mr. Raley calls EF&I. This compares to the prices used in the Hatfield model switch curve that also are switch prices paid to the vendor. Hatfield includes costs for the other components shown on Mr. Raley's chart in subsequent calculations. Mr. Raley was claiming that Southwestern Bell Telephone's \$85 per line was significantly higher than Hatfield's \$59 per line for an 80,000 line switch. This comparison was flawed for two reasons: [1] Mr. Raley stated that the \$85.00 per line was based on an average switch size of 53,653 lines; therefore, Mr. Raley's comparison to the Hatfield 80,000 line switch is inappropriate; and [2] Hatfield's \$59 per line is the cost without trunk ports and when these are added back in, the actual price Hatfield calculates for a 53,653 line switch is approximately \$80 per line. Mr. Raley's \$85.00 per line is, in actuality, very close to the \$80 per line that Hatfield calculates.

26 www.nortel.com/home/press/1997b/6_16_9797219_US_West.html, See Exhibit 3 to this